

ERGONOMICS PROGRAM

Lesson Guide

#14



OBJECTIVES: *Upon completion of this topic you will be able to:*

- Describe the purpose of the Navy's Ergonomics Program.
- Define ergonomics.
- Identify the elements of the Ergonomics Program.
- Define work site analysis.
- Describe training requirements for the Ergonomics Program.

Ergonomics Program

- This program seeks to prevent injuries and illnesses by applying ergonomic principles to identify, evaluate and control ergonomic risk factors for **WORK RELATED MUSCULOSKELETAL DISORDERS (WMSD's)**
- These factors pose biomechanical stress to a worker's body as a consequence of posture and force requirements, work/rest regiments, repetition rate or other similar factors.

Ergonomics Program

- Includes physiological and physiological factors
- Examples of physiological WMSD's include
 - repetitive and prolong static activities
 - forceful exertions
 - awkward postures
 - excessive vibration from power tools or vehicles
 - workstations lacking adjustability
- Examples of physiological factors
 - heat
 - cold
 - other environmental extremes
 - shift work or extended work schedules

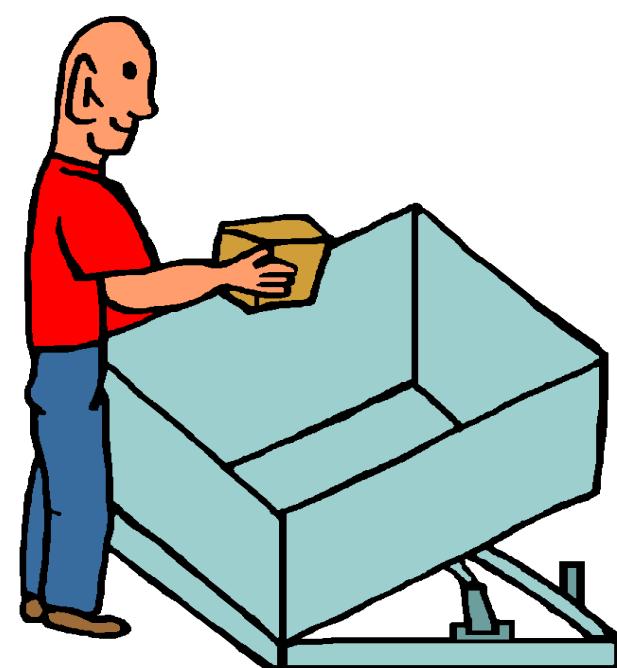
Ergonomics Program

- Ergonomics is the study of work and workplace design in relation to the physiological and physiological capabilities of people

- To prevent injuries, ergonomics is the place to turn.

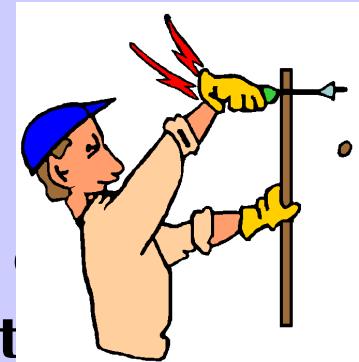


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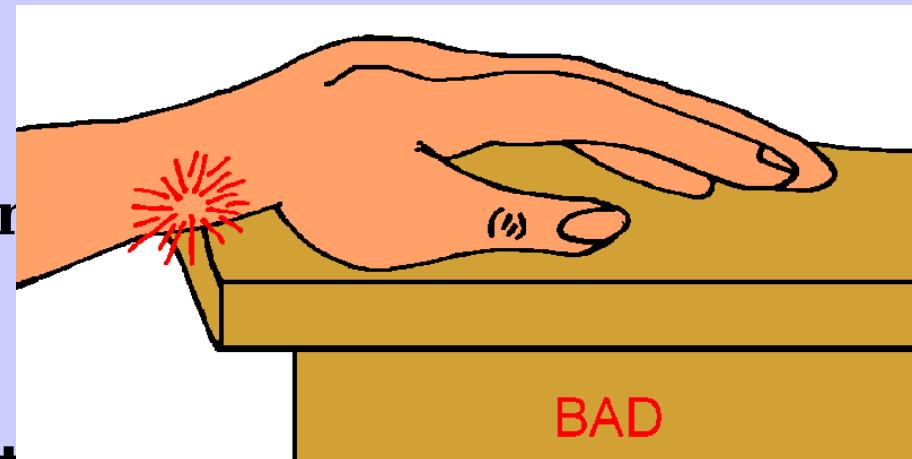
Ergonomics Program

- WMSD's are disorders of the musculoskeletal and nervous systems, occurring in upper or lower extremity and the spine
- These injuries also include Cumulative Trauma Disorders (CTD)
 - **CTD is any combination of stresses applied to the body over a period of time from which adequate recovery does not occur.**
- Two types of CTD's
 - **repetitive stress and repetitive motion injuries (typing, using a screw driver, ...)**
 - **sustained position injuries caused by sitting in one position for long periods of time**



Ergonomics Program

- Ergonomics Program Overexertion injuries (macrotrauma) is divided into two categories - sprains and strains
 - **frequency of heavy lifting**
 - **pushing**
 - **pulling**
 - **carrying of heavy objects**



- Examples of WMSD's
 - **tendinitis, tenosynovitis, bursitis**
 - **hand arm vibration syndrome, vibratory white finger**
 - **back strain, carpal tunnel syndrome**
 - **tennis elbow, golfer's elbow, trigger finger**

Ergonomics Program

- Navy ergonomics program elements are:
 - **Management commitment**
 - **employee involvement**
 - **work site analysis**
 - **hazard prevention and control**
 - **medical and case management**
 - **training**
- Case management is an important element of ergonomics
 - **staying closely involved and informed after injury**
 - **assisting employee in recovery and return to work**
 - **both for well-being of employee and control of cost**

Ergonomics Program

- Management Commitment and Employee Involvement
 - Management Commitment
 - **Aggressive and coordinated actions to prevent WMSD's to control claims and costs**
 - **provides resources and motivation force necessary**
 - Employee Involvement
 - **identification of existing and potential hazards**
 - **development of effective abatement**
 - A properly trained worker is the cornerstone of a successful in-house program.

Ergonomics Program

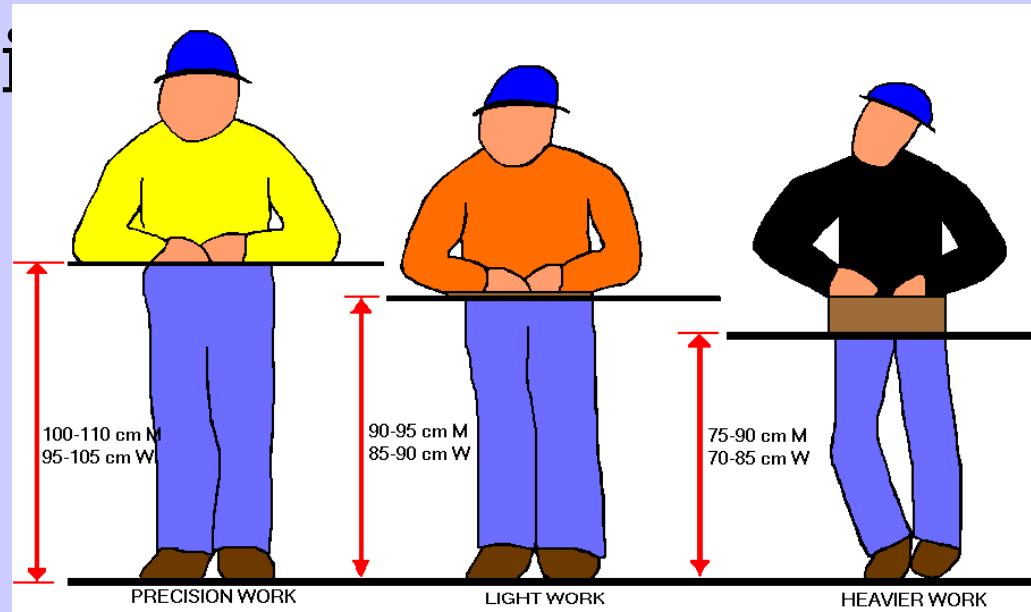
- **Ergonomics Program Methods to involve employees**
 - Properly training safety and health committees to review analyze problem areas and recommend corrective actions to management
 - Worker based ergo teams, with proper training
 - Technically qualified staff
 - Commanding Officer involvement
 - Aggressive, comprehensive, and integrated program to manage and control compensation claims, ensuring proper review, processing and administration by cognizant personnel offices

Ergonomics Program

- Work site analysis shall include:
 - part involved
 - nature of injury/illness
 - time of day
 - frequency
 - severity
 - physical location
 - cost of CTD cases
 - description of job(s)

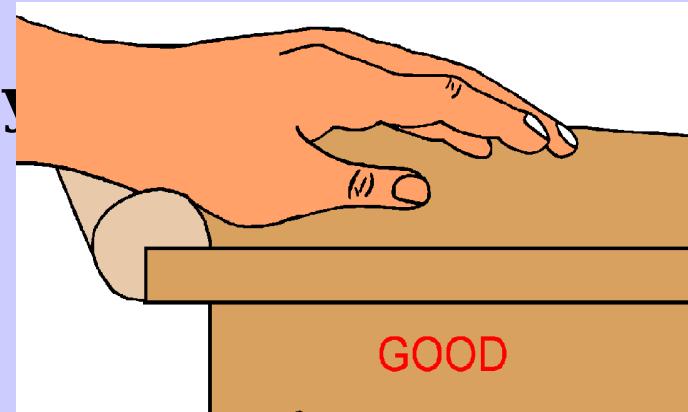
Ergonomics Program

- **Worksite analysis shall include (Cont):**
 - absenteeism
 - personnel turnovers
 - fitness and age of worker
- **USE Appendix and 23D**



Ergonomics Program

- Correcting ergonomic problems include
 - process elimination
 - engineering controls
 - substitution of materials/tools/equipment
 - improved work practices
 - administrative controls
 - lifting restriction
 - adjustment of work-rest cycle
 - slowing work pace
 - job rotation



Ergonomics Program

- Ergonomics Program NOTE: Activities shall not use back support belts or wrist splints as personal protection devices in the prevention of back or wrist injuries.
- These devices are considered medical appliances, and must be prescribed by a credentialed health care provider who shall assume responsibility for medical clearance, proper fit of the devices, and treatment, monitoring and supervision of the wearer.

Ergonomics Program

- TRAINING
 - Ergonomic definition and concepts
 - CTD and back injury prevention
 - Varieties of CTD and causes
 - Ergonomics of hand tools
 - Equipment design
 - Proper maintenance of facilities, equipment, and tools
 - Risk factor identification/perform analysis
 - Effective case management
 - Safe and unsafe ergonomic behaviors of employees
 - Basic structures of the body, how they work, how they are affected by ergonomically related disorders
 - Benefits of team approach

Ergonomics Program

- **TARGETED TRAINING**
 - Anatomy and physiology to explain how the back works
 - Biomechanics of lifting and lifting techniques
 - How to avoid back injuries
 - Weight control and physical fitness
- Activities shall determine training requirements for MANAGERS, SUPERVISORS, EMPLOYEES, OCCUPATIONAL SAFETY, AND HEALTH PROFESSIONAL STAFF, HEALTH CARE PROVIDERS, FACILITIES
- NAVOSHENVTRACEN offers a one week NAVY ERGONOMICS PROGRAM (A-493-0085)

REVIEW AND SUMMARY

